Amendments to the Drawings:

The attached sheets of drawings include changes to Figs. 4, 11 and 12, and new Fig. 13. These sheets, which include Figs. 4, 11 and 12, replace the original sheets including Figs. 4, 11 and 12.

REMARKS/ARGUMENTS

Claims 1-23 are pending in the application. Claims 1, 6, 13-14, 16 and 19 have been amended. In view of the following, all of the claims are in condition for allowance. If, after considering this response, the Examiner does not agree that all of the claims are allowable, then the Examiner is requested to schedule a teleconference with the Applicants' attorney to further the prosecution of the application.

Objection to the drawings

Fig. 4 has been amended to show features of the invention specified in claims 13 and 14 of the present application.

Fig. 11 has been amended to correct informalities.

New Fig. 13 has been added to show features of the invention specified in claim 11 of the present application.

Objection to the specification

The specification and Fig. 12 have been amended to correct informalities.

Objection to claims 1 and 13-14

Claims 1 and 13-14 have been amended to correct informalities.

Rejection of claims 13 and 14 under 35 U.S.C. 112, first paragraph

Paragraph [23] has been amended to include features of the invention specified in claims 13 and 14.

It should be noted that the subject matter of claim 13 is shown in amended Fig. 4 and discussed in paragraphs [20]-[23] of the present application. In addition, the subject matter of claim 14 is shown in Figs. 4 and 12 and discussed in paragraphs [20]-[23] and [35] of the present application.

Rejection of claims 3, 9 and 12-14 under 35 U.S.C. 112, second paragraph

Paragraph [25] has been amended to include features of the invention specified in claims 3, 9 and 12.

It should be noted that the subject matter of claims 3, 9 and 12 is discussed in paragraphs [21] and [24]-[25] of the present application. Specifically, the configuration signals 29 configure the test circuit (TMU) 21 to execute different decoding algorithms (paragraph [21]). The configuration signals 29 configure the TMU 21 to execute one kind of decoding algorithm when operating in a scan test mode, and then the configuration signals 29 reconfigure the TMU 21 to execute another kind of decoding algorithm when operating in a functional test mode. If the TMU 21 is implemented as an FPGA (field programmable gate array), the TMU 21 can easily be configured and reconfigured by the configuration signals 29 by simply turning on or off the appropriate gates within the FPGA. In this way, the configuration (and thus mode of operation) of the TMU 21 is responsive to the configuration signals 29.

In addition, claims 13 and 14 have been amended to correct informalities.

Rejection of claims 1, 3-6, 8-12 and 16-23 under 35 U.S.C. 102(e) as being anticipated by Wang et al. (US 2003/0154433)

Claim 1

Claim 1, as amended, recites a test circuit applying the decoded test data bits on each of the plurality of decoded outputs.

For example, referring, *e.g.*, to FIG. 4 and the corresponding disclosure, a test circuit (TMU) 21 receives encoded test channel data having M bits per channel and provides decoded test data having N bits per channel (where N is greater than M). It should be noted that the TMU 21 applies the decoded test data having N bits to each of the outputs 23. In this way, each output 23 has N bits of decoded test data, while the input 27 has only M bits of encoded data.

Wang, on the other hand, does not disclose a test circuit applying the decoded test data bits on each of the plurality of decoded outputs. Instead, Wang simply discloses a broadcaster 701 that converts a 4-bit virtual scan input 726-729 into an 8-bit broadcast scan pattern 734-743. However, each output line (734-743) still has the same number of bits (1 bit) as each input line (726-729). This has nothing to do with decoding an input having M bits per channel into an output having N bits per channel (where N is greater than M). In fact, after reviewing Wang in its entirety, the Applicants' attorney is unable to find any mention of a test circuit that

provides N bits of decoded data on each output line (734-743) while receiving only M bits of encoded data on each input line (726-729). Therefore, Wang does not satisfy the limitations of claim 1.

Claims 6, 16 and 19

Claims 6, 16 and 19, as amended, are patentable for reasons similar to those recited above in support of the patentability of claim 1.

Claims 3-5, 8-12, 17-18 and 20-23

Claims 3-5, 8-12, 17-18 and 20-23 are patentable by virtue of their respective dependencies from independent claims 1, 6, 16 and 19.

Rejection of claims 2, 7 and 15 under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Mielke et al. (US 6,195,772)

Claims 2, 7 and 15 are patentable by virtue of their respective dependencies from independent claims 1 and 6.

Rejection of claims 13 and 14 under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Correale et al. (US 6,001,662)

Claims 13 and 14 are patentable by virtue of their dependency from independent claim 6.

CONCLUSION

In light of the foregoing remarks, claims 1-23 are in condition for allowance, which is respectfully requested.
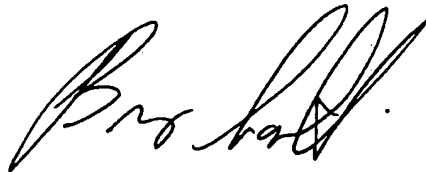
Applicants have enclosed with this response a petition for extension of time to respond along with a check for payment of the required fees. It is not believed that any other fees are due as a result of this amendment. However, should any additional fees be required, please charge them to Deposit Account No. 07-1897.

If, after considering this response, the Examiner does not agree that all of the claims are allowable, then it is respectfully requested that the Examiner contact the Applicants' attorney at (425) 455-5575.

DATED this 16th day of August, 2006.

Respectfully submitted,

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Attachments: Drawing Replacement Sheet
Annotated Drawing Sheet Showing Changes
Return Postcard
Amendment Transmittal Letter
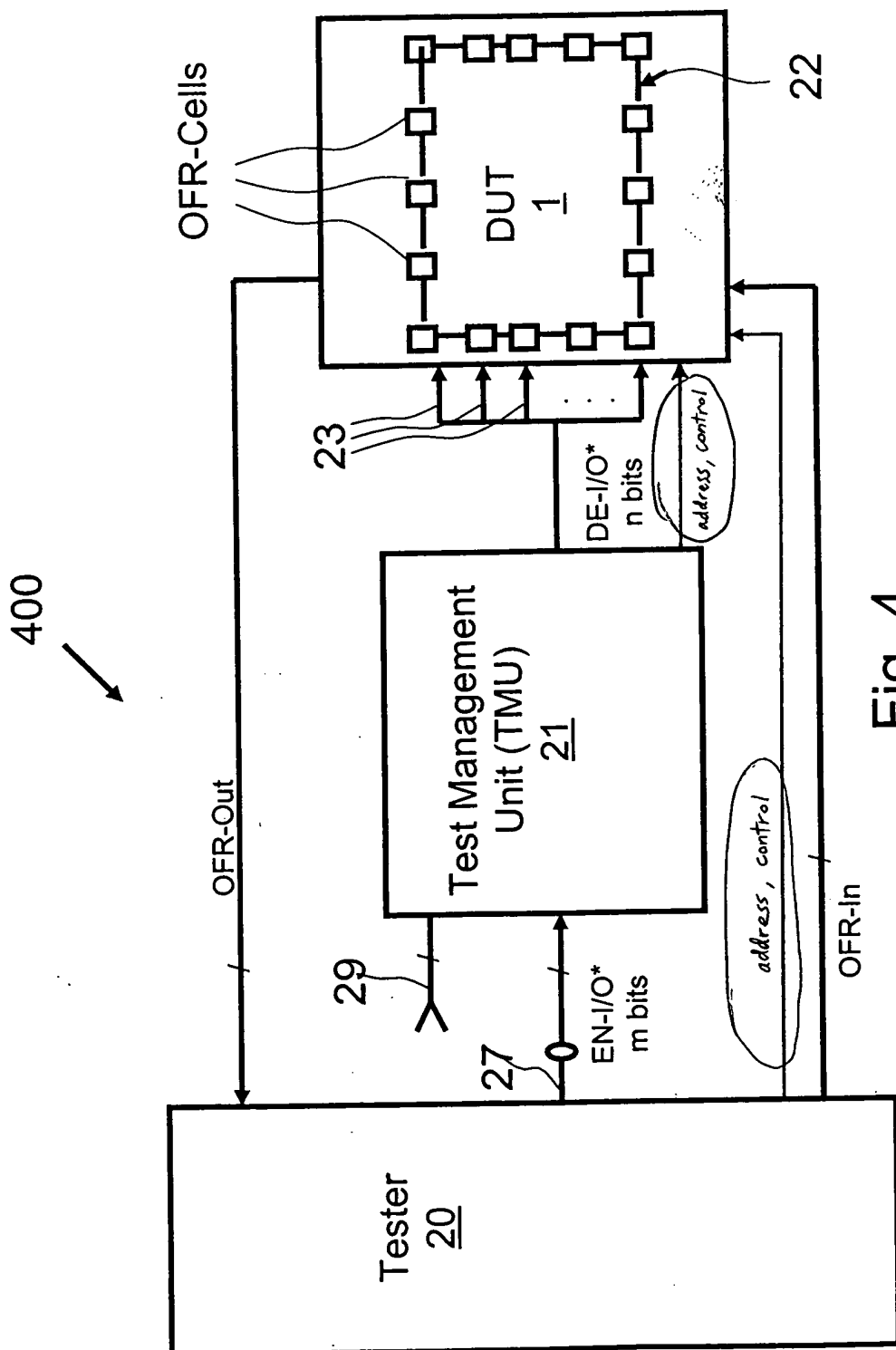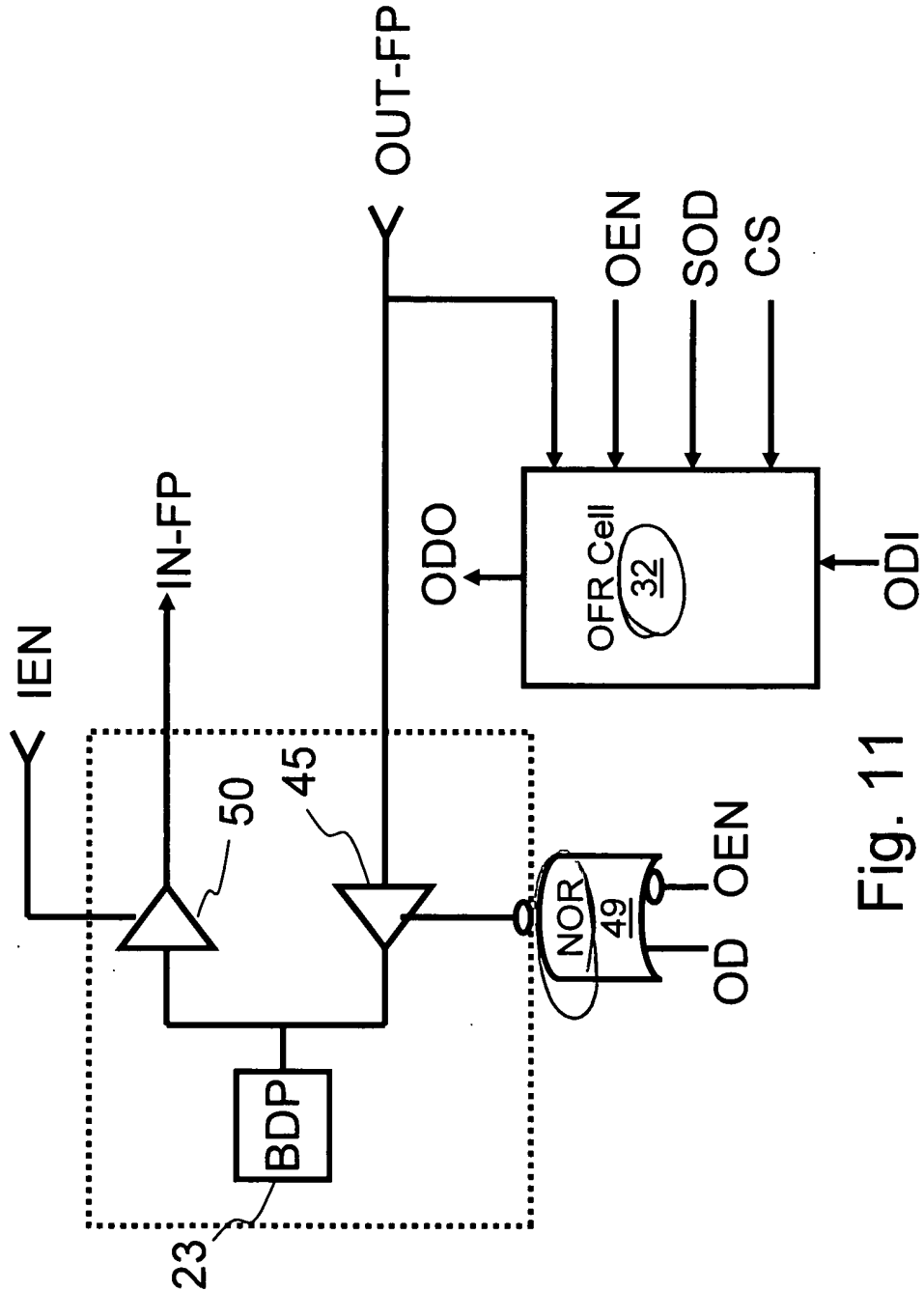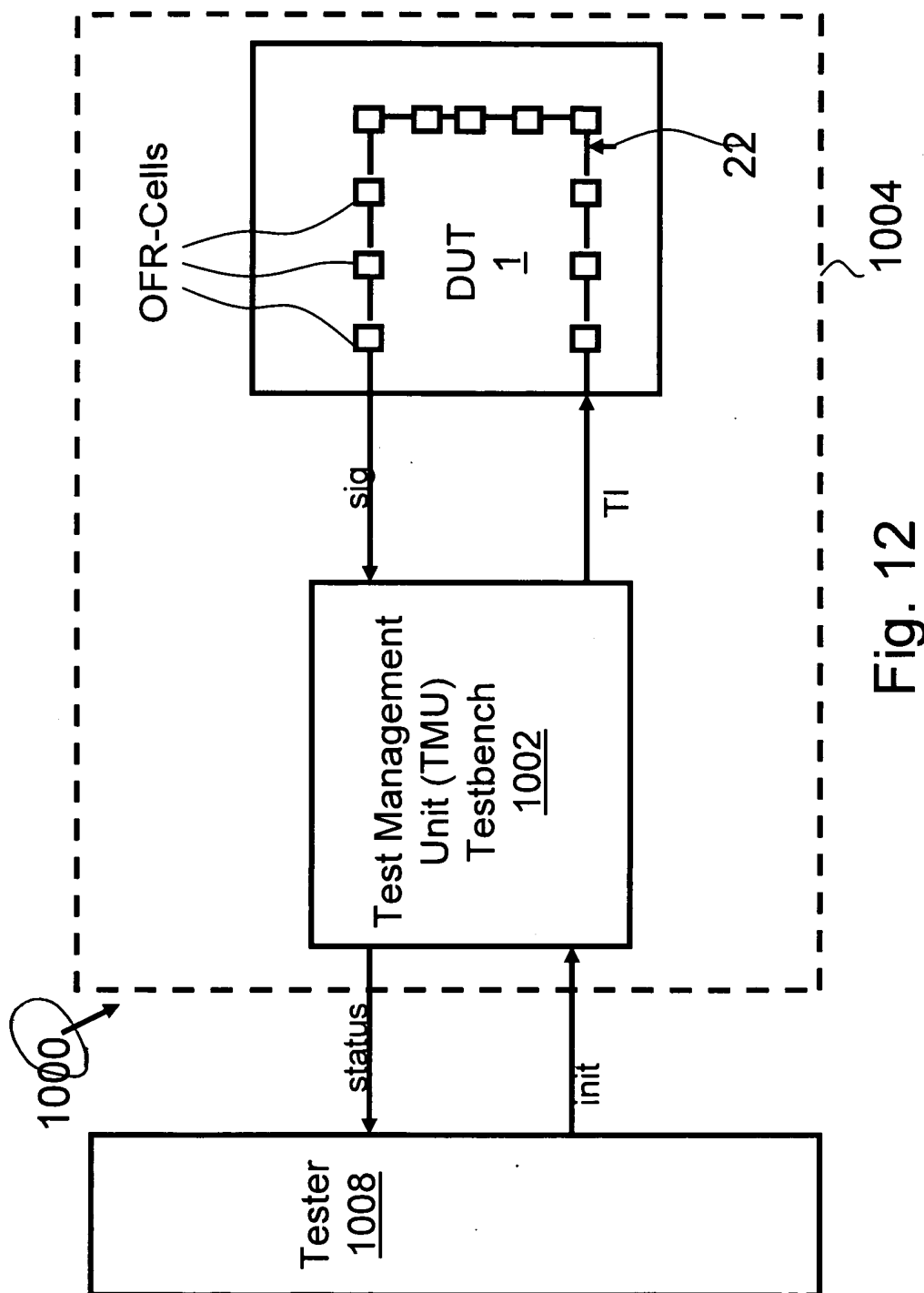Petition for Extension of Time (2 mo) and Check

Fig. 4

OUT-FP

IN-FP

IEN

OEN

SOD

CS

ODO

OFR Cell

32

ODI

50

45

BDP

23

NOR

49

OD   OEN

Fig. 11

Fig. 12